AMENDMENTS

In the claims:

Please add new claims 29-46 as follows:

29. A method for analyzing a sample for the presence and/or activity of an enzyme, said method comprising the steps of:

providing a hydrophobic material;

providing an amphipathic substrate having a hydrophobic portion, and a hydrophilic portion, said hydrophilic portion including a reporter moiety thereupon, said substrate being capable of being cleaved by said enzyme so as to produce a hydrophilic fragment which includes said reporter moiety;

disposing said substrate in said hydrophobic material;

contacting the hydrophobic material having said substrate disposed therein, with said sample and with a polar solvent, whereby any of said enzyme which is present in said sample will cleave said substrate and produce said labeled hydrophilic fragment, which fragment will migrate into said polar solvent; and

detecting the presence of said reporter in said polar solvent or in said hydrophobic layer; whereby the presence of said reporter in said polar solvent and/or the reduction of the quantity of said reporter in said hydrophobic layer is indicative of activity of said enzyme.

30. The method as in claim 29, wherein said hydrophobic material comprises a layer.

31. The method as in claim 30, wherein the step of detecting the presence of said reporter comprises detecting the amount of said reporter in said hydrophobic layer; wherein the concentration of said reporter in said hydrophobic layer is inversely proportional to the activity of said enzyme.

32. The method as in claim 29, wherein the step of detecting the presence of said reporter comprises detecting the amount of said reporter in said polar solvent; whereby the concentration of said reporter in said polar solvent is proportional to the activity of the enzyme.

33. The method as in claim 29, wherein the step of providing a hydrophobic material comprises the further step of supporting said hydrophobic material on a support.

34. The method as in claim 33, wherein said support comprises a micro-well plate.

35. The method as in claim 33, wherein said support comprises a plurality of beads.

36. The method as in claim 33, wherein said reporter is a radioactive material and wherein said support includes a radiation responsive material.

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37. The method as in claim 33, wherein said reporter is a non-radioactive material and wherein said support includes a responsive material.

38. The method as in claim 30, wherein said hydrophobic layer is covalently attached to said support.

39. The method as in claim 30, wherein said hydrophobic layer is a lipid.

40. The method as in claim 39, wherein said lipid comprises phosphatidylethanolamine.

41. An assay for analyzing a sample for the presence of an enzyme therein, said assay comprising:

a body of a hydrophobic material;

an amphipathic substrate disposed in said hydrophobic material, said amphipathic substrate including a hydrophobic portion which interacts with said hydrophobic material so as to retain said substrate therein, and a hydrophilic portion having a reporter moiety thereupon, said substrate being capable of being cleaved by said enzyme so as to produce a hydrophilic fragment which includes said reporter moiety.

42. The assay as in claim 41, wherein said body of hydrophobic material is disposed upon a support.